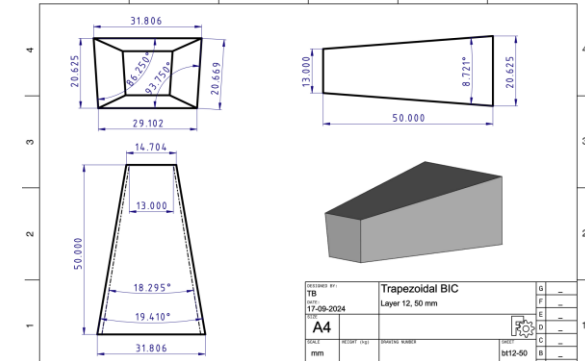
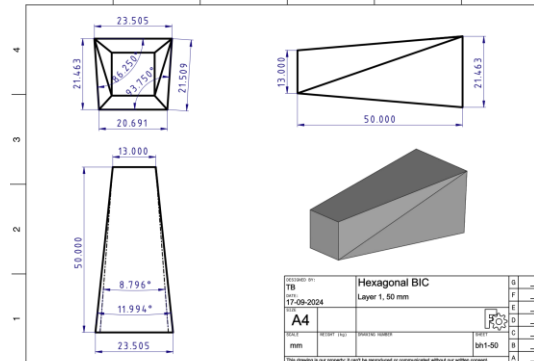
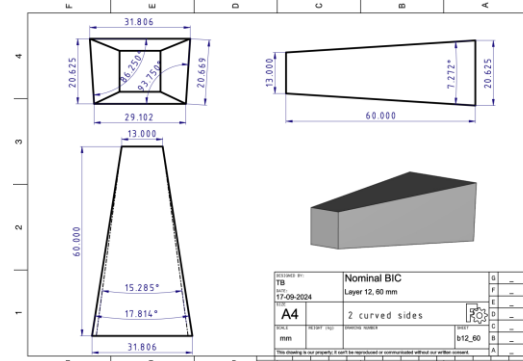
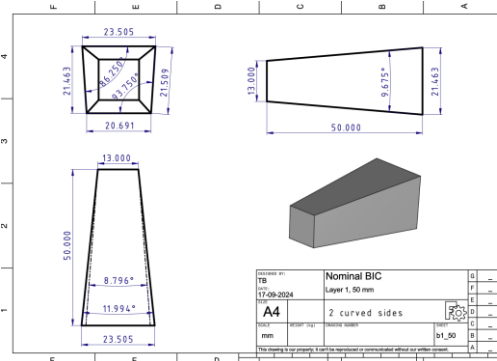
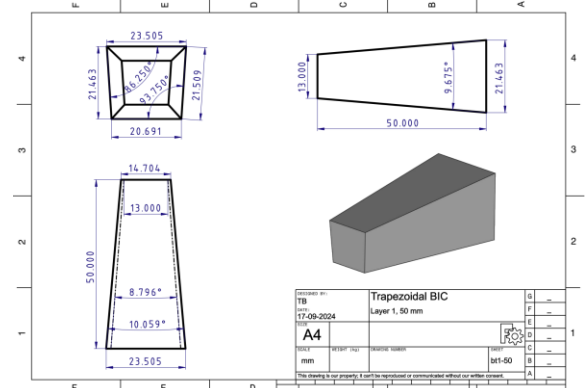
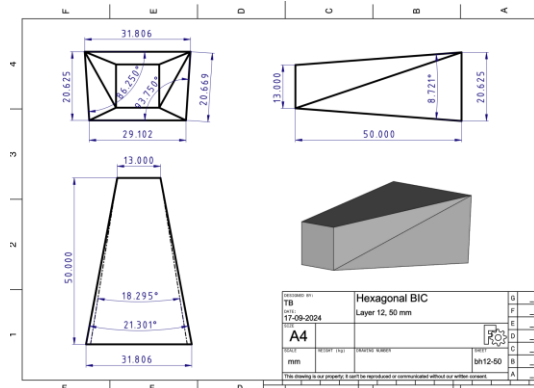
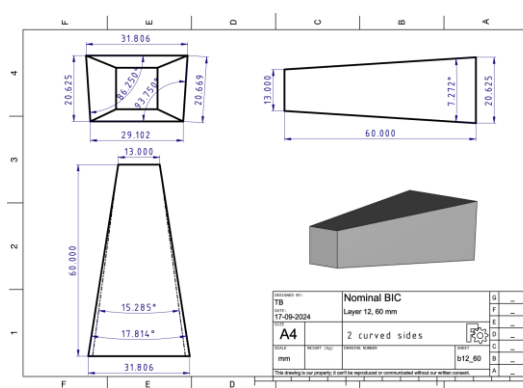


SciFi fluorescence & LG transmittance CERN PS - T10 beam test

Bo Gyeong SEO, Jun Seop SHIN, Shin Hyung KIM

Department of Physics, Kyungpook National University



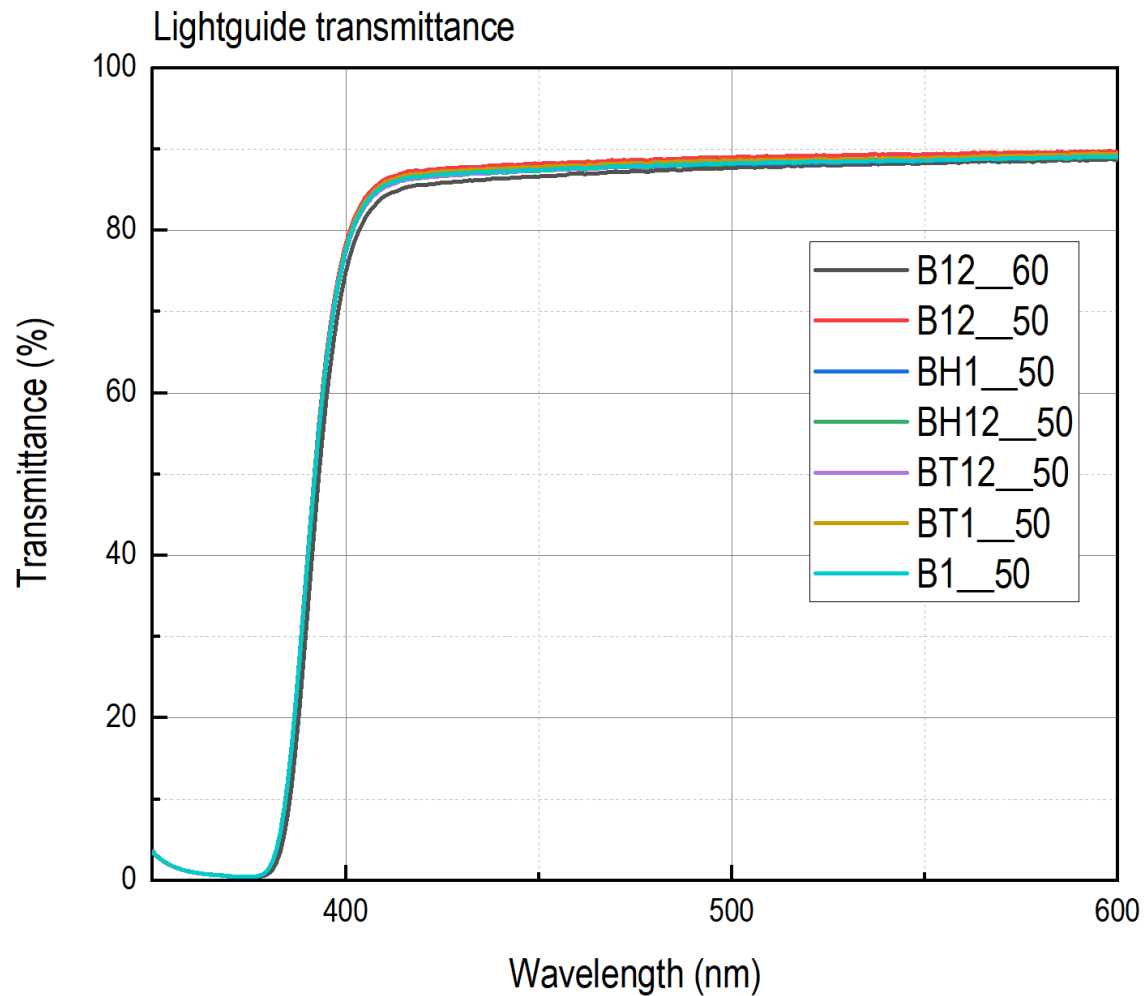
Nominal
Layer 1

Nominal
Layer 12

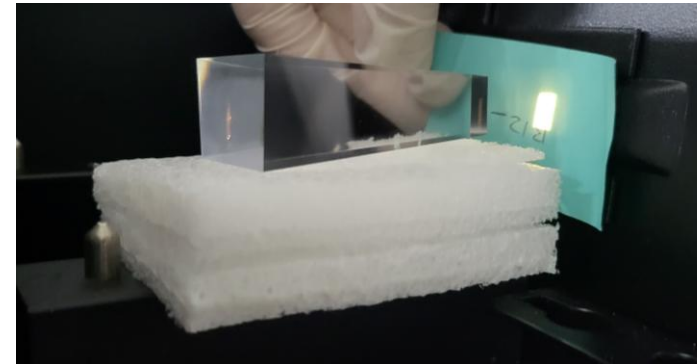
Hexagonal
Layer 1

Trapezoid
Layer 12

7 Lightguides with different lengths and shapes
Same materials ?



Agilent Cary 100 – UV/Vis

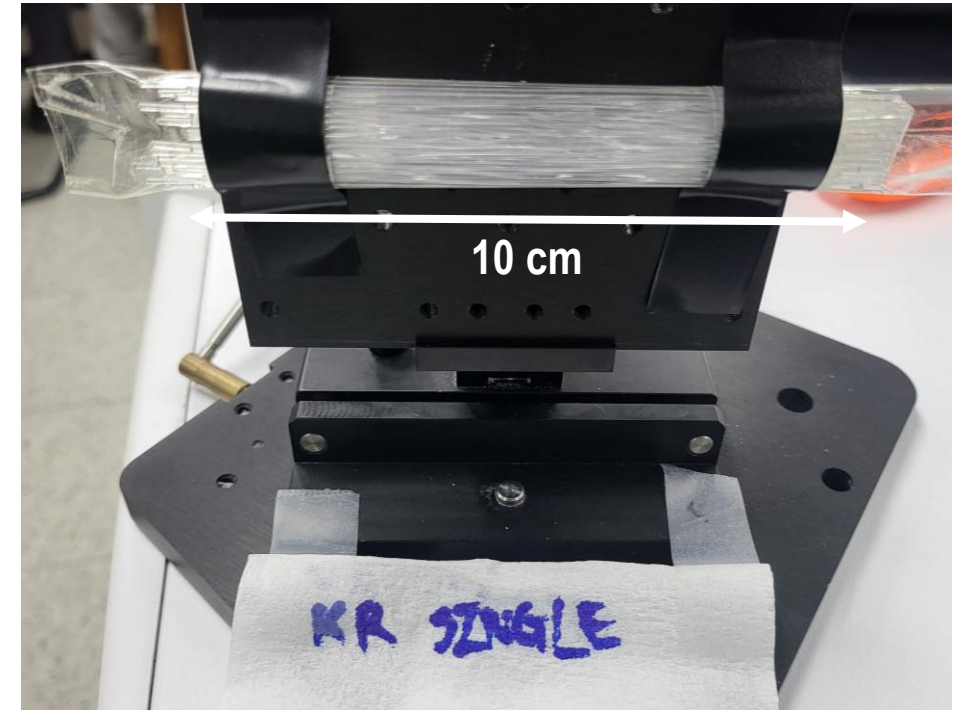
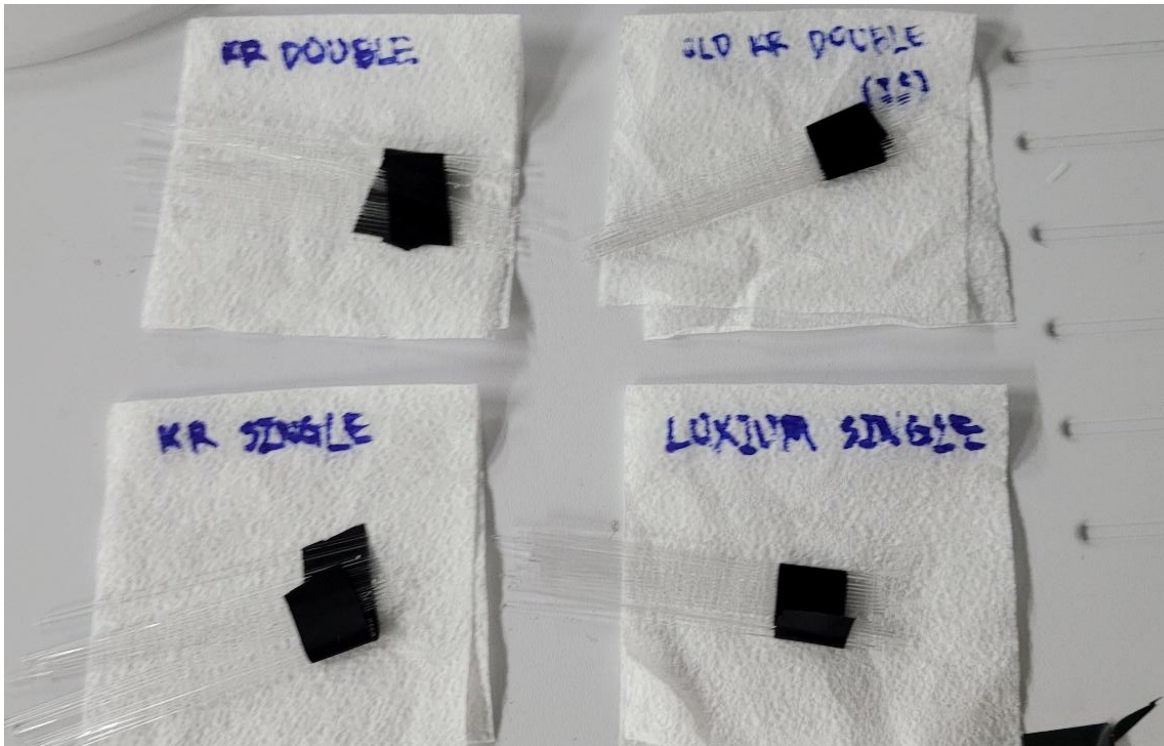


Beam is normal with the incident and exiting surface
Transmittance will be same for same material

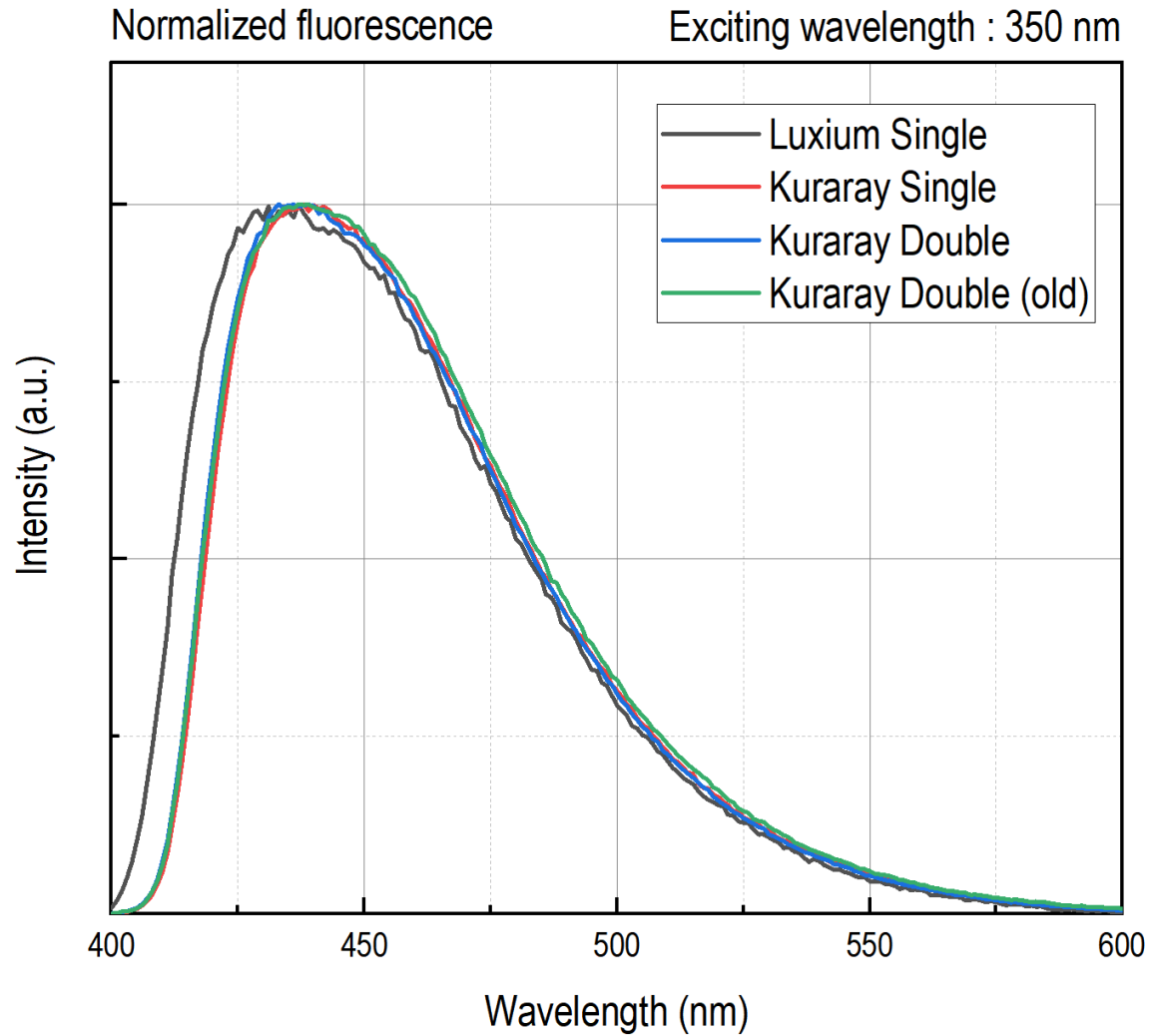
Future plan :

Get cosmic ray data with Pb/SciFi calorimeter with current square LG

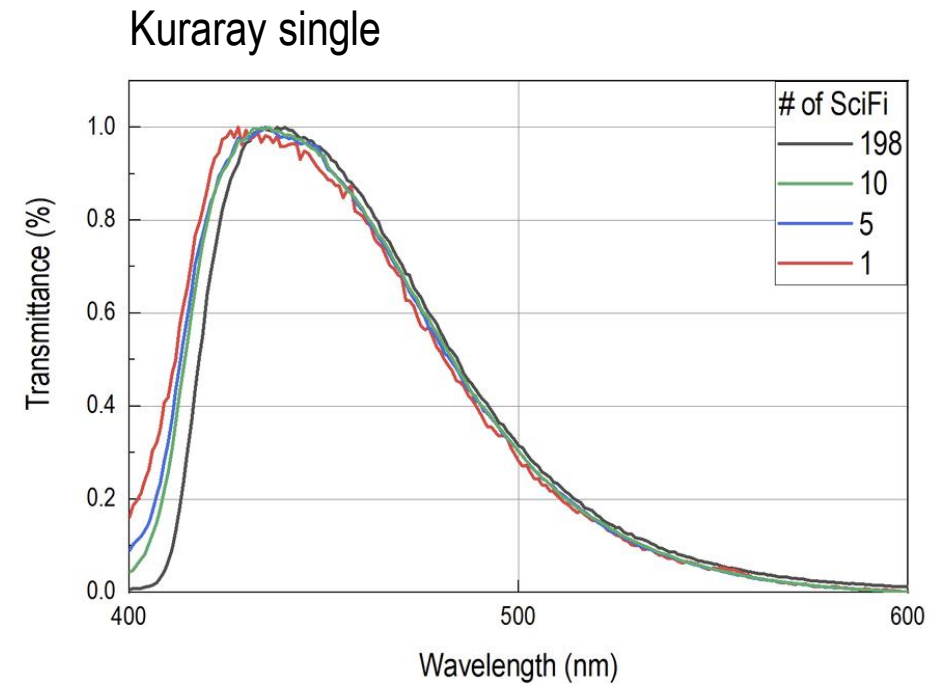
If possible, wrap Al Mylar around new LG,
and compare with current square-LG data



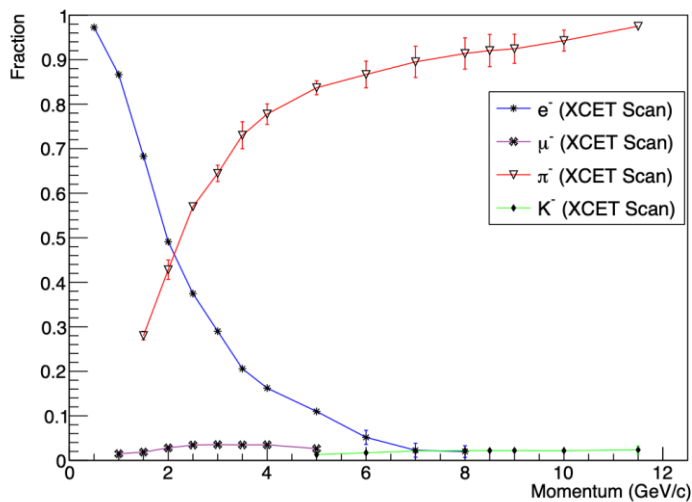
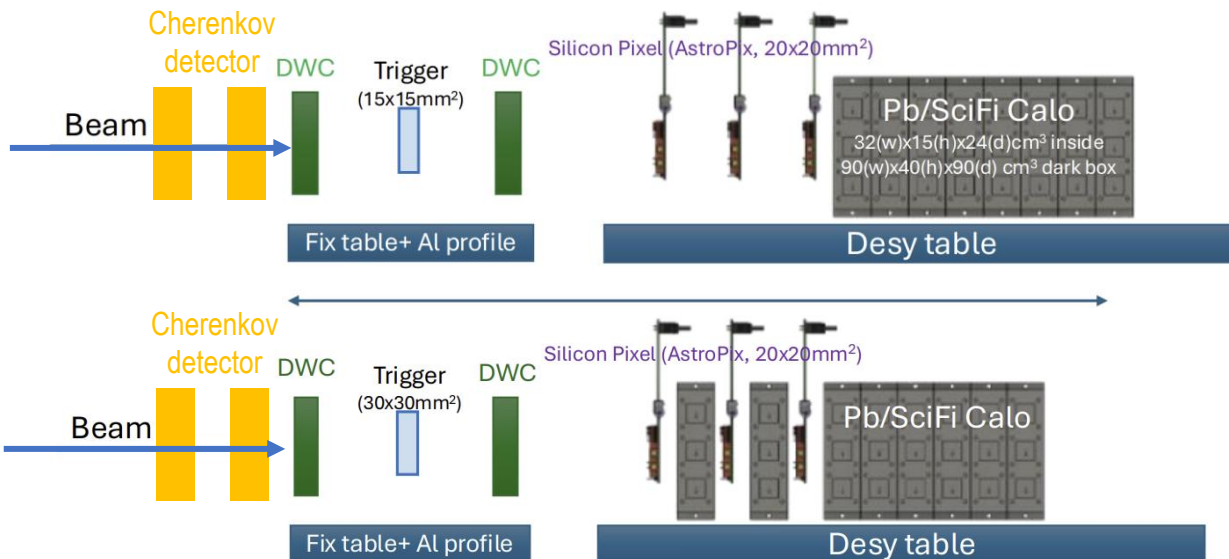
150 fibers each bundle
Avg. length of 10 cm



Varian Cary Eclipse - Fluorescence Spectrophotometer

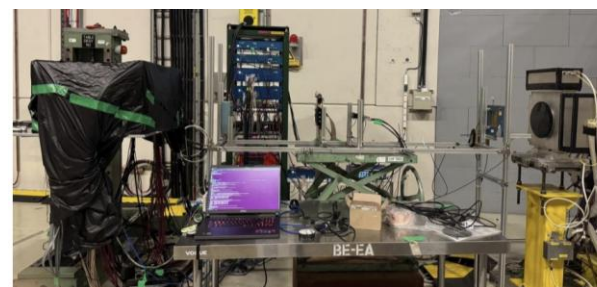


Slight difference at 400 nm

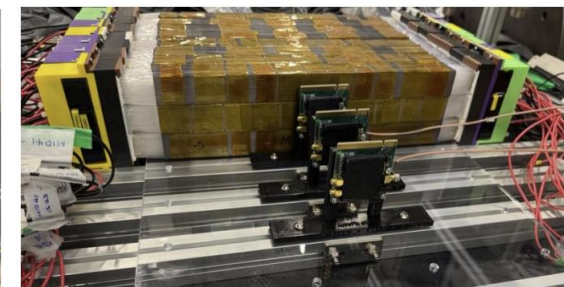


Negative beam PID

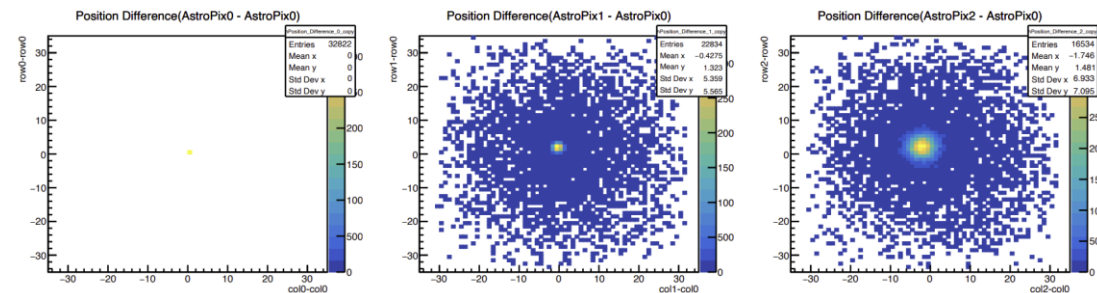
- Proton-synchrotron : Proton beam collision with target
Secondary particles : **electron**, muon, pion kaon etc..
- Cherenkov detector for PID
1~3 GeV/c : 100 ADC
4, 5 GeV/c : 30 ADC



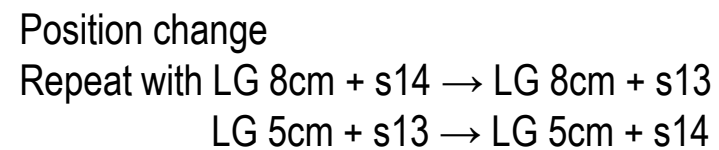
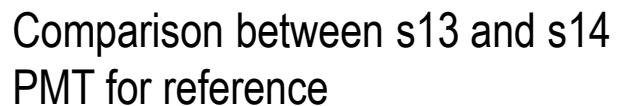
Beam setup



3x8 calorimeter with Astropix

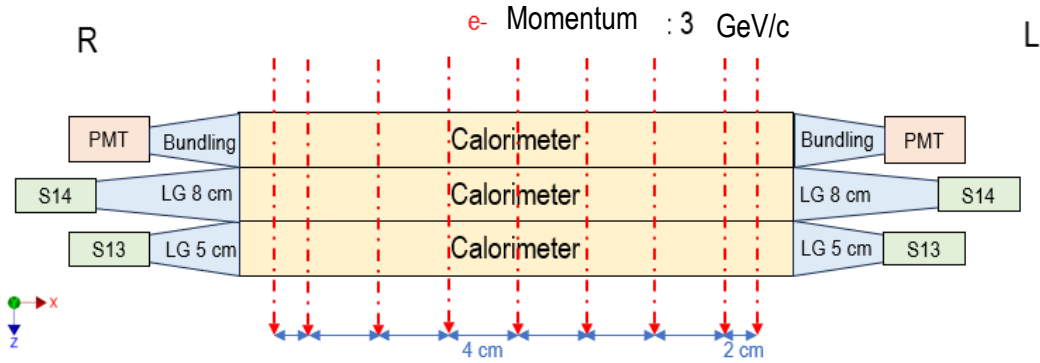


Astropix run (between calorimeter)



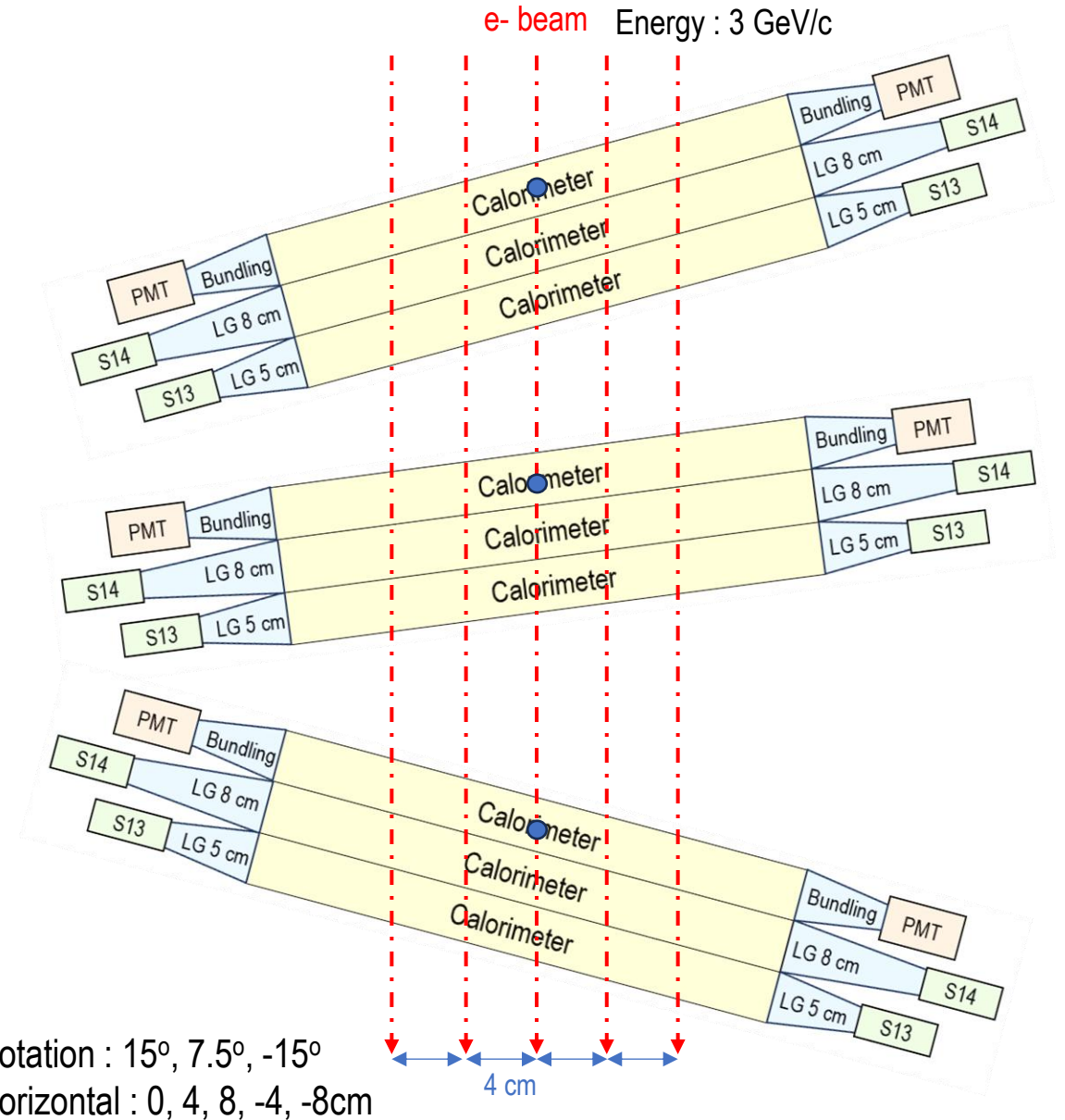


Horizontal scan



Horizontal : 0, 4, 8, 12, 14, -4, -8, -12, -14 cm

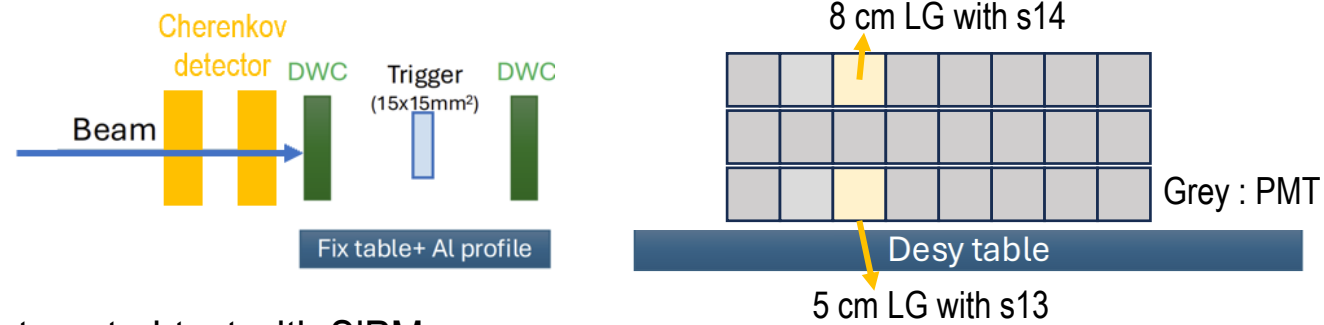
Experimental results will be compared
with Geant4 simulation



Rotation : 15°, 7.5°, -15°
Horizontal : 0, 4, 8, -4, -8 cm



연세대	어윤
	장서윤
	유휘동
중앙대	이경필
서울시립대	김우종
	권민재
	허우현
강릉원주대	안근필
	정진룡
성균관대	배준석
	이형준
경북대	이창희
	심민섭
	고원준
	서보경
	신준섭
	조현석
	김신형
부산대	홍윤하
	류재혁
	이종원
	복정수
	임상훈



Integrated test with SiPM
Comparison with 3x8 calorimeter (all PMT)